

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

HUMAN PERFORMANCE

Group Chairman's Factual Report

DCA13MA120

ADDENDUM 1

(2 PAGES)

Insert the following material at the end of 2.3 Crew Resource Management / Threat and Error Management Training.

According to Asiana, the FO had received a CRM training module titled “Human Centered Automation” in September 2008, during his initial CRM training course.¹ This training module appeared to have been originally developed by another airline. It discussed automation policy, the nature of automation, effects of automation on human performance, levels of automation, and strategies for effective flightcrew communication about automation state. It emphasized the importance of an automation policy that included a provision urging pilots to “verbalize, verify and monitor.” It gave examples of how such a provision should be applied, including the following:

With any mode changes to the MCP, the PF should verbalize the change(s). Both pilots should verify the change(s) using the FMA and monitor for expected aircraft performance. [Slide 31]

The training instructed Asiana pilots to reduce the level of automation if they felt overloaded or confused.

According to Asiana, all three crewmembers received two slides addressing use of automation as part of a CRM recurrent training course that they completed in March or April 2013. These slides described three levels of automation: high, medium, and low. It described the operation of the airplane with the AP off and the AT on as a “low level” of automation. The slides described situations when it was appropriate to disconnect the AP or AT, such as during unusual attitude recovery or air collision avoidance. The slides also described how flightcrews could utilize automation when resolving airplane malfunctions.

According to Asiana, all three flightcrew members viewed a computer-based training module titled “Monitoring and Workload Management” sometime between March 14, 2013 and April 4, 2013, as part of CRM recurrent training. This training module presented information about the involvement of flightcrew monitoring errors in aircraft accidents, flightcrew roles and responsibilities with respect to monitoring, airline standard operating procedures, training and practice of monitoring skills, workload management, and areas of vulnerability. The module also described the concept of situation awareness and presented a threat and error analysis of the accident involving American Airlines Flight 965 near Cali, Colombia.

According to Asiana, the PM received instructor designation CRM training on May 16, 2013. This training advocated a concept described as “sentimental leadership.” It emphasized the exercise of self-control, respect, trust, personal interest and consideration, positive organizational sentiment and amiable relationships among constituents of a team. It described the role of a leader as that of a model, helper, and mentor.

¹ According to Asiana, the PF and PM had not received this training module because they had completed initial CRM training before it was incorporated into the program.

LIST OF ATTACHMENTS

- Attachment 1: “Human-Centered Automation” slideshow seen during CRM Initial training by the FO in 2008
- Attachment 2: CBT Slides addressing use of automation seen during CRM recurrent training by the PF, PM, and FO in 2013
- Attachment 3: “Monitoring and Workload Management” slideshow seen during CRM recurrent training by the PF, PM, and FO in 2013
- Attachment 4: “Instructor (CRM)” slideshow seen by the PM during instructor CRM training in 2013